

EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 2000021402
PUBLICATION DATE : 21-01-00

APPLICATION DATE : 30-06-98
APPLICATION NUMBER : 10185157

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INT.CL. : H01M 4/58 H01M 4/02 H01M 4/04
H01M 10/40

TITLE : POSITIVE ELECTRODE ACTIVE
MATERIAL AND MANUFACTURE
THEREFOR AND NONAQUEOUS
ELECTROLYTE SECONDARY
BATTERY USING THE SAME

ABSTRACT : PROBLEM TO BE SOLVED: To prolong the cycle service life by forming a positive electrode active material of lithium, containing composite oxide having the specific composition, and having including a sulfate radical included in.

SOLUTION: The active material of a positive electrode constituting a secondary battery together with a negative electrode, a separator and a lithium salt containing nonaqueous electrolyte, is formed of composite oxide expressed by the formula, and a containing sulfate radical is preferably formed of an inorganic and/or organic sulfate of 0.01 to 5 wt.% to the positive electrode active material. The deterioration of a cycle characteristic of the battery and capacitive reduction are not caused by the contained sulfate radical. The positive electrode active material having low impurity is preferable and is desirably obtained by baking under the presence of oxygen after adding a sulfate radical to a material containing an Li source and an M source or measuring and adjusting the concentration of the sulfate radical in a sulfate radical containing material, and also becomes a positive electrode mix by adding the sulfate radical. In the formula, M represents Co and Ni, N represents a transition metal element which is different from M and one or more kinds from among the elements of second, 13th, 14th groups of a periodic table, X represents a halogen element, and x, y, z are such that $(0.2 < x \leq 1.2, 0 \leq y \leq 0.5, 0 \leq z \leq 1, \text{ and } 0 \leq a \leq 2z)$ respectively.

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